DOCUMENT RESUME

ED 361 098 PS 021 648

AUTHOR Britt, Gena Covell; Myers, Barbara J.
TITLE Brazelton Intervention with Substance Abusing Mothers and Their Infants: An Experimental Intervention.
SPONS AGENCY National Inst. on Drug Abuse (DHHS), Rockville, Md. Div. of Resource Development.; Virginia Commonwealth Univ., Richmond.
PUB DATE Mar 93
CONTRACT NIDA-06094
NOTE 10p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (60th, New Orleans, LA, March 25-28, 1993).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Attachment Behavior; Behavior Change; *Behavior Patterns; Behavior Rating Scales; Child Rearing; *Drug Abuse; *Intervention; Low Income; *Mothers; *Neonates; *Parent Child Relationship; Parent Education
IDENTIFIERS *Brazelton Neonatal Behavioral Assessment Scale

ABSTRACT

Research on the effectiveness of the Neonatal Behavioral Assessment Scale (NBAS) in enhancing the mother-newborn relationship has had inconsistent results. A study was conducted to assess the effectiveness of an NBAS intervention with a high-risk mother group. The study focused on low-income, drug-using mothers, measuring the effectiveness of the NBAS and the Mothers' Assessment of the Behavior of her Infant (MABI), a questionnaire version of the NBAS filled out by the mother, as interventions to enhance mother-infant interaction. The study also investigated mothers' receptivity to the interventionist and procedure as a predictor of the effectiveness of the intervention. The study sample consisted of 54 mother-infant pairs, who were randomly assigned to one of four levels of intervention: NBAS teaching session along with MABI questionnaires; NBAS teaching session only; MABI questionnaires only; or no intervention. Subjects were observed during a feeding session at home 4 weeks later, and the Nursing Child Assessment Feeding Scale was used to measure mother-infant interaction. Maternal receptivity was rated both in the hospital and during the home visit. Results showed no differences in mother-infant interaction between intervention groups. Maternal receptivity was unable to predict intervention effectiveness. (AC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED 361 098

Brazelton Intervention with Substance Abusing Mothers And Their Infants: An Experimental Intervention

Gena Covell Britt and Barbara J. Myers

Virginia Commonwealth University

Poster presented at the 60th Bienneial Meeting of the Society for Research in Child Development, New Orleans, Louisiana, March, 1993.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Gena C. Britt

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

PS 021648

Funding for this research was provided by VCU Faculty Grant-in-Aid awarded to the second author, and NIDA Grant DA-06094. A complete version of this paper is available from the first author at Virginia Commonwealth University, Department of Psychology, Richmond, Virginia 23284-2018.

BEST COPY AVAILABLE

Abstract

The purpose of this study was to test the effectiveness of the Neonatal Behavioral Assessment Scale and the Mothers' Assessment of the Behavior of her Infant (MABI) as interventions to enhance mother-infant interaction with low-income drug-using mothers. It also investigated the ability of mothers' receptivity to predict intervention effectiveness. Fifty-four mother-infant pairs were randomly assigned to one of four levels of intervention: NBAS teaching session along with MABI questionnaires, NBAS teaching session only, MABI questionnaires only, or no intervention. Four weeks later, subjects were observed during a feeding session at home. Maternal receptivity was rated both in the hospital and during the home visit. Results showed no differences in mother-infant interaction between intervention groups, and that maternal receptivity was unable to meaningfully predict intervention effectiveness.

Background

Much research has focused on using the Neonatal Behavioral Assessment Scale (NBAS) as an intervention during the newborn period with the hopes of enhancing the parent-infant relationship. Research testing the effectiveness of the NBAS as an intervention has yielded inconsistent results.

The lack of consistency in this body of research suggests other variables may be moderating the effects of this intervention. The risk level of the population is one such variable. Higher risk groups might benefit more and therefore demonstrate stronger effects. On the other hand, they may have many other practical life concerns interfering with intervention effectiveness. One high risk group seemingly in need of intervention consists of drug-abusing mothers and their infants.

The mother's receptivity might also affect intervention effectiveness. A mother who is more receptive to the interventionist and the procedure is likely to get more out of an NBAS session than an unreceptive mother.

Hypotheses

1. Intervention via the Neonatal Behavioral Assessment Scale and Mother's Assessment of the Behavior of her Infant would enhance performance on the Nursing Child Assessment Feeding Scale and mothers' knowledge of infant behavior.
2. Mothers' receptivity would be positively related to the effectiveness of the intervention.

Method

Subjects

Subjects were 54 drug-using mothers and their newborn infants born at an urban university hospital. Drug use for 46 (85.2%) of the subjects was verified through a positive urine toxicology on either the infant or the mother. Most of the women (92.6%) used cocaine, either alone or along with another drug. Table 1 displays subject characteristics.

Materials

The Neonatal Behavioral Assessment Scale (NBAS) was taught to mothers as an intervention to enhance mother-infant interaction.

The Mother's Assessment of the Behavior of her Infant (MABI) was also used as an intervention. The MABI is a questionnaire version of the NBAS which is filled out by the mother.

The Nursing Child Assessment Feeding Scale (NCAFS) was used to measure mother-infant interaction during a home visit at four weeks. It is a standardized scale measuring both mother and infant behaviors dichotomously as to whether or not each occurred during a feeding session.

Additionally, maternal receptivity was measured using a three-item Likert-type scale, and maternal knowledge of infant behavior was measured with a series of questions derived from the NBAS.

Procedure

Mothers were randomly assigned to an experimental group

before being invited to participate in the study and received $20 for their participation at the end of the 4-week visit.

In the hospital, the following procedures took place:

Control Group The experimenter talked with the mother about the conditions of the study and about her baby.

MABI-only Mothers were asked to complete one MABI questionnaire each week for four weeks.

Brazelton-only Mothers were taught how to elicit items from the Brazelton exam on their own infants.

Brazelton-plus-MABI Mothers experienced the same procedure as those in the Brazelton and MABI groups.

For all groups, after the experimenter finished this initial procedure, both the experimenter and the mother's nurse rated the mother's receptivity.

During a home visit at four weeks, a blind observer scored a feeding session according to the NCAFS and rated the mother's receptivity. Mothers were also asked a series of questions about their knowledge of infant behavior.

Results

Effectiveness of NBAS Intervention

ANOVAS revealed no significant differences between any of the intervention groups and the control group on either mother-infant interaction or maternal knowledge of infant behavior. Mean NCAFS scores for each group are presented in Table 2.

Predictive Value of Receptivity. A multiple regression equation with NCAFS score as the criterion variable and the three

receptivity scores and the demographic variables as predictor variables was significant. In addition to the whole model being significant, the predictors representing both the nurses' ratings and the four-week rating of receptivity was also significant. The initial interviewer's rating of receptivity was not significant. As addressed in the Discussion, these significant results were not meaningful.

A second regression used score on the knowledge scale as the criterion variable with the same predictor variables as in the first analysis. This regression was not significant.

Discussion

Intervention Effectiveness

This experiment suggests that the NBAS and MABI interventions are not effective enhancers of mother-infant interaction for drug-using mothers as measured by the NCAFS. The means in Table 2 show that there was indeed very little real difference between the groups.

The low mean NCAFS score (51) found in this sample is cause for concern; under 55 is considered to be an indicator of high risk.

Predictive Value of Receptivity

The nurses' rating of receptivity was a significant predictor of mother-infant interaction, but a closer look suggests that this difference is not very meaningful. Mothers who were rated high and low in receptivity scored about the same on the NCAFS (M = 52), while those who were rated with medium

receptivity scored lower on the NCAFS ($\underline{M}$ = 50). This makes no practical or theoretical sense, indicating the nurses' rating of receptivity, while a statistically significant predictor, held no practical value.

Conclusion

These non-significant findings are important for at least two reasons:

1. Given the inconsistency in the literature, these findings contribute to the evidence of the NBAS as a non-effective intervention.
2. Due to the high cost of administering this intervention, if it is indeed not effective for this population, it is important to know this before establishing it as an intervention on a larger scale.

The growing number of substance-using women with newborns are clearly in need of services to help them provide optimal care and nurture for their infants. The results presented here do not suggest that this intervention is effective for these mothers, but the low overall NCAFS scores are at a worrisome level.

Table 1

Maternal Characteristics (n=54)

	Mean	SD
AGE	26.0	3.8
PARITY	2.8	1.3
GRAVIDITY	3.6	1.6
HOLLINGSHEAD	21.9	8.8
	Number	(%)
RACE		
Black	49	(90.7%)
White	5	(9.3%)
MARITAL STATUS		
Married	0	(0%)
Never Married	43	(79.6%)
Separated	7	(13.0%)
Divorced	4	(7.4%)
Widowed	0	(0%)
EDUCATION		
Less than High School	29	(53.7%)
High School Graduate	15	(27.8%)
Some College	10	(18.5%)

Table 2

Mean NCAFS Scores by Group

Group	NCAFS Score	
	Mean	SD
Control	51.9	5.9
MABI	50.5	6.1
Brazelton	51.1	8.0
Brazelton/MABI	52.6	4.3

Note. ANOVA revealed no significant differences between groups.